

METHOD OF RETAINING ENDS OF FRACTURED BONES IN APPPOSITION DURING FIXATION BY PLASTER-OF-PARIS DRESSING, ETC.

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FRACTURES capable of receiving a fixed dressing at any time in their treatment may be so treated at the outset, provided ample room by cotton padding and incision of the whole length of the dressing be made at the time of application to allow for swelling incident to such fracture. The habit of putting on a pillow splint to-day, and a board splint to-morrow, and a plaster splint next week, is in my opinion a useless barbarity to the patient, when under the influence of an anæsthetic the bones may be adjusted at the first visit and kept in a firm but yielding case by a fixed dressing of lino, starch, plaster of Paris, or silicate of potash.

The lino may be used when lightness is especially desirable, fortified by a thin strip of splint taken from board, the same as used at the back of picture frames; plaster of Paris or silicate of potash when greater strength is demanded, as in bones of the lower extremity.

I have practised this method in a great many cases, and have yet to meet the first ununited fracture or the first strangulated extremity; when the cases are compound, ample fenestra can be made for drain and dressing if infected.

The essential features of this treatment, as important as the fixed dressing itself, are the ample padding over prominences and where swelling will occur, and, most essential, the splitting down to the skin of the whole length of the plaster splint.

As the limb swells the cast expands, as it contracts the slot may be made larger and brought together with adhesive strips.

There is no splint that will adapt itself to the contour of the parts as this, nor give all-round support as well. It is there to stay until the union of bone takes place; or, if the limb requires passive motion, the shell may be removed and replaced at will. When we have fractures in the middle of long bones, it is not so difficult under an anæsthetic to adjust the ends and fix them by the plaster; but when near the extremity of the bone, as in supracondyloid fractures of the humerus, any one who has seen many of these breaks knows how strong the tendency to overriding is, and how difficult it is to overcome by manipulating the arm and forearm with the hands, especially when the line of fracture is oblique, as it generally is from indirect violence. In few fractures near a joint do we have greater and quicker swelling than those near the elbow, so that the fixed dressing has odds against it there if anywhere; and yet I have used it over and over again without detriment, but with benefit to the patient. I have devised a method, new to me at least, of holding the errant ends of bone in position while the plaster dressing is applied.

Having put the patient to sleep and washed the arm, I take two or three strips of bandage, smear them with vaseline, and apply one strip around the humerus above the seat of fracture, one just over the seat of fracture, and the third on the forearm just below the elbow. These strips are given to two assistants, and under your direction the upper one may be pulled back, the lower one down, and the middle one tightened to keep the bones from tilting up at that point after they have been approximated.

Now put on a loose flannel roller from hand to axilla, then a sufficiency of raw cotton, and finally plaster rollers, ignoring the traction strips and putting the bandages, cotton, etc., around or over them as if they did not exist. The assistants in the mean time keep up their pull on them in the line directed. In five minutes the plaster has hardened, following the irregularities of the arm and overlying padding, and the bones are fixed in the position desired. But what about these tense straps that the assistants have been pulling on? Will

they not strangulate the circulation or produce sores? They might if left; but as they are covered with vaseline, by letting go one end there is no difficulty in pulling them out from beneath the plaster and leaving a small hole, which can be filled with plaster at once to make it neat. As soon as they are removed, split the plaster down in front and bring it together loosely with adhesive strips, for, unless it is so split, the surgeon will surely be called before midnight to do so, to relieve the tension due to the rapidly swelling elbow. I have repeatedly kept the splint on during the whole treatment with satisfactory results.